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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/779,869	02/08/2001	Steven M. Horowitz	14531.79	6689
47973 7590 05/15/2007 WORKMAN NYDEGGER/MICROSOFT 1000 EAGLE GATE TOWER 60 EAST SOUTH TEMPLE SALT LAKE CITY, UT 84111			EXAMINER LAMBRECHT, CHRISTOPHER M	
			ART UNIT 2623	PAPER NUMBER
			MAIL DATE 05/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/779,869

Applicant(s)

HOROWITZ ET AL.

Examiner

Chris Lambrecht,

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,12,14,15,17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,12,14,15,17 and 19-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 14, 2007 has been entered.

Response to Arguments

2. Applicant's arguments filed February 14, 2007 have been fully considered but they are not persuasive.

Independent claims 1 and 17 require that a content provider determine the format in which channels of digital programming content received at a set-top box are encoded. Applicant contends that Sie, in contrast, describes a system in which, "between a content provider and the set-top box, a transmission system converts the programming from the supplied format to a format that can be understood by the set top box;" and, thus, "the digital content is changed between transmission by the content provider and receipt by the set-top box[.]" (Applicant's Reply, 8.)

Referring to the system illustrated in figure 3, Sie discloses, "[t]he transmission system 108 converts the signal from the satellites to a format understood by the set top boxes 120." (Sie, col.5 ll.27-29.) Thus, the transmission system may convert the format of a satellite signal on which digital programming content is carried. However, Sie provides no indication that the

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transmission system changes the format in which the content itself is encoded. Alternatively, even if the transmission system were to change the format of the content itself, the transmission system is, in itself, a content provider, or at least a part thereof. Accordingly, the format in which the content is encoded, as received by the set-top box from the transmission system, is a format determined by a content provider within the meaning of the claims.

Claims 1 and 17 also require that the set-top box store the content as it was received at the set-top box, as provided by, and in a format determined from, the content provider. Applicant asserts that, in contrast, the digital content in Sie “is further compressed by the set-top box before the content is stored.” (Reply, 8.)

Referring to the set-top box 120 illustrated at figure 5, Sie discloses that, after tuning, demodulating, and decrypting the signal received from the transmission system 108, the digital channel select circuit 516 selects the desired one of multiple digital channels interleaved in a decrypted MPEG signal, and that “[a]t this point, the digital channel is compressed in an MPEG-2 format.” (Sie, col.6 ll.12-31.) Thus, after being tuned, demodulated, decrypted, and demultiplexed, what remains of the signal received at the set-top box is a digital channel compressed according to an MPEG-2 format. Despite Applicant’s assertion to the contrary, Sie does not disclose that the set-top box further compresses the received signal or the content carried thereon. As such, the set-top box stores the digital programming content as it was received at the set-top box, as provided by the content provider. Moreover, the received digital programming content is, as discussed above, in a format determined from the content provider.

Accordingly, the pending claims stand rejected as set forth below.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 12, 14, 15, 17, and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Sie et al. (Sie), U.S. Patent No. 7,024,679.

Regarding claim 1, Sie discloses a system having a set top box receiving digital programming content comprised of multiple channels (col.4 ll.56-61), and wherein the programming content of each channel is provided to the set top box in an encoded digital format (e.g., MPEG-2) determined by the provider of the content (col.3 ll.62-67), the system including a method for recording one or more selected channels without decoding them prior to recording so as to store them in the same encoded digital format as determined by the content provider in order not to degrade the recording quality of the selected channels, and thereby also permitting display of one of the recorded channels while recording another one of the selected channels, the method comprising the acts of:

receiving at the set top box (120) a multiplexed signal (col.6 ll.12-14) containing multiple channels (col.6 l.24) of digital programming content (col.6 l.50), wherein the digital programming content of each channel received at the set top box is encoded in a digital format (col.6 l.31) that is determined by a content provider (col.3 ll.62-67), and wherein the set top box comprises a single tuner (508) (col.6 ll.1-6);

in the set top box, isolating and thereby selecting a first channel (col.6 ll.26-27) from the multiple channels of the digital programming content (col.6 ll.24-26), wherein isolating and selecting the first channel includes:

with the single tuner and a demodulator (512) (col.6 ll.4-5), tuning the multiplexed signal (col.6 ll.12-18) and producing a multiplexed transport stream (col.6 ll.18-21) comprising audio, video, and data packets (col.16 ll.9-11) associated with at least the first channel (col.6 ll.24-28); and

with a transport demultiplexer (516) (col.6 ll.5-6) of the set top box receiver (col.6 ll.1-6), demultiplexing the multiplexed transport stream output by the demodulator to isolate the selected first channel (col.6 ll.26-30);

sending digital content of the first channel from the transport demultiplexer to a storage medium (132) (col.7 ll.39-40) in the set top box (col.7 ll.35-39) and storing the digital content of the first channel on the storage medium (col.7 ll.45-46) as it was received at the set top box, and without decoding it (selected channels are stored prior to decoding at display interface 524, col.7 ll.45-48), such that the digital format in which the digital content of the first channel is stored may be determined from the content provider, the digital format in which the digital content is stored (col.6 ll.30-31, col.13 ll.39-40) being the same digital format with which the first channel was received at the set top box and as sent from the content provider (col.3 ll.62-67), in order to store the digital content of the at least one channel without degrading it;

retrieving digital content of a second channel from the storage medium (col.14 ll.26-36), wherein digital content of the second channel has previously been stored prior to decoding (col.13 ll.39-40);

decoding the previously stored digital content of the second channel into an analog format (col.13 ll.39-42) for display at a display device (col.6 ll.32-42) while

storing the digital content of the first channel on the storage medium (col.14 ll.29-37);
and

displaying the decoded analog format of the content of the second channel on the
display device (col.13 ll.39-43, col.6 ll.32-42).

As to claim 12, Sie discloses a method as defined in claim 1, wherein at least the first
channel is compressed (col. 6, lines 30-31).

As to claim 14, Sie discloses a method as defined in claim 1, wherein the decoder
produces an NTSC format output (col. 6, lines 34-37); NTSC signals include both audio and
video components.

As to claim 15, Sie discloses a method as defined in claim 1, wherein displaying the
content of the second channel is performed while storing the contents of the first channel (col.
14, lines 33-37).

Regarding claim 17, Sie discloses a system for receiving digital programming content
comprised of multiple channels (col.4 ll.56-61), and wherein the programming content of each
channel is provided in an encoded digital format (e.g., MPEG-2) determined by the provider of
the content (col.3 ll.62-67), the system including an apparatus for recording one or more selected
channels without decoding them prior to recording so as to store them in the same encoded
digital format as determined by the content provider in order not to degrade the recording quality
of the selected channels, the apparatus comprising:

an entertainment system (see figs.5 & 6) for receiving (col.6 ll.6-7), isolating (col.6 ll.26-
27), and storing (col.7 ll.35-36, 45-46) a first channel of digital programming content (col.6

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ll.26-27) while decoding (col.6 ll.32-36) a second channel of digital programming content (col.13 ll.36-42, col.14 ll.20-37), the entertainment system comprising:

a display device (e.g., a television) for displaying programming content of a selected channel (col.5 ll.65-67); and

a set top box (120) configured to receive a multiplexed signal (col.6 ll.12-14) containing multiple channels (col.6 l.24) of digital programming content (col.6 l.50), wherein the digital programming content of each channel received at the set top box is encoded in a digital format (col.6 l.31) that is determined by a content provider (col.3 ll.62-67), the set top box being further configured to isolate a first channel of digital programming content (col.6 ll.26-27) and display the first channel (col.6 ll.32-39) or a second channel on the display device (col.6 ll.49-53), the set top box including:

a single tuner (508) and a demodulator (512) (col.6 ll.1-6) adapted for receiving and operating on a multiplexed signal (col.6 ll.12-14) containing the digital programming content to identify multiple channels within the multiplexed signal (col.6 ll.14-26) and which contain the digital programming content (col.6 ll.49-51), wherein the demodulator is adapted to produce a multiplexed transport stream (col.6 ll.18-21) comprising audio, video and data packets associated with a plurality of channels (col.16 ll.9-11);

a transport demultiplexer (512) coupled to the output of the demodulator and adapted to receive the multiplexed transport stream and demultiplex the plurality of channels of the transport stream in order to permit selection of the first

channel (col.6 ll.24-30), the transport demultiplexer being capable of selecting a channel encoded in a plurality of digital formats (col.16 ll.6-11);

a storage device (132) (col.7 ll.35-40) coupled to the transport for recording the first channel (col.7 ll.45-46) without decoding it (selected channels are stored prior to decoding at display interface 524, col.7 ll.45-48) so as to store it as it was received at the set top box, such that the digital format in which the digital content of the first channel is stored may be determined from the content provider, the storage device storing the first channel using the same digital format (col.6 ll.30-31, col.13 ll.39-40) with which the at least one channel was received at the set top box and as provided by the content provider (col.3 ll.62-67), and in order to store the digital content of the at least one channel without degrading it, wherein the storage device can receive content encoded in any of the plurality of digital formats from the transport demultiplexer (col.7 ll.57-61); and

a decoder (524) connected to the storage device for decoding digital programming content (col.6 ll.34-36) of the second channel (col.13 ll.39-42), wherein the digital programming content of the second channel was stored on the storage device prior to decoding (col.13 ll.39-40, col.14 ll.20-36), and the decoder is adapted to decode the digital programming content of the second channel into an analog format (col.6 ll.32-42, col.13 ll.39-42) at the same time that the storage device records the first channel (col.14 ll.33-37).

As to claim 19, Sie discloses an apparatus as defined in claim 17, wherein the decoder (524) that is connected to the storage device (132) is adapted to display the second channel on

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the display device while the first channel is recorded on the storage device (col.13 ll.39-42, col.14 ll.33-37).

As to claim 20, Sie discloses an apparatus as defined in claim 19, wherein the decoder (524) is also coupled to the transport demultiplexer (516) so that a selected first channel output from the demultiplexer may be simultaneously directed to both the storage device and the decoder (see figure 6).

As to claim 21, Sie discloses an apparatus as defined in claim 17, further comprising a conditional access system (controller 612) for determining whether a selected channel may be displayed (col.7 ll.48-52, col.8 l.64-col.9 l.3).

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Conclusion

5. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Lambrecht, whose telephone number is (571) 272-7297. The examiner can normally be reached on weekdays from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller, can be reached on weekdays at (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chris Lambrecht,
Examiner
Art Unit 2623

CL


ANDREW Y. KOENIG
PRIMARY PATENT EXAMINER